

PATENT CLAIMS

1. A converter circuit having a first and a second converter element (1, 2), with each converter element (1, 2) having a DC voltage circuit (3) and in each case 5 one converter element phase (u₁, v₁, w₁) of the first converter element (1) being connected to a respective converter element phase (u₂, v₂, w₂) of the second converter element (2), and having a transformer (4), with the secondary windings (6) of the transformer (4) 10 being connected to the connected converter element phases (u₁, v₁, w₁, u₂, v₂, w₂) of the first and second converter elements (1, 2), and with one secondary winding (6) in each case being connected in series in each connection of one converter element phase (u₁, v₁, 15 w₁) of the first converter element (1) to one converter element phase (u₂, v₂, w₂) of the second converter element (2), characterized in that each secondary winding (6) is formed by two winding 20 elements connected in series with one another, with the junction point of the two winding elements forming a neutral-point connection (16), and in that two filter capacitors (8) which are connected 25 in series with one another are in each case connected in parallel with each secondary winding (6).

2. The converter circuit as claimed in claim 1, characterized in that an inductance (7) is connected in series between each converter element phase (u₁, v₁, w₁, u₂, v₂, w₂) and the secondary winding (6) for one 30 of the converter elements (1, 2).

3. The converter circuit as claimed in claim 1, characterized in that an inductance (7) is connected in 35 series between each converter element phase (u₁, v₁, w₁, u₂, v₂, w₂) and the secondary winding (6) for both converter elements (1, 2).

4. The converter circuit as claimed in one of the preceding claims, characterized in that a phase isolating switch (9) is provided on each converter 5 element phase (u1, v1, w1, u2, v2, w2).

5. The converter circuit as claimed in one of the preceding claims, characterized in that the junction point of the two filter capacitors (8) is connected to 10 the neutral-point connection (16).

6. The converter circuit as claimed in one of the preceding claims, characterized in that a connecting switch (10) is provided for connecting the neutral-point connections (16) to one another. 15

7. An energy storage device having a first and a second voltage source (11, 12), characterized in that a converter circuit as claimed in one of claims 1 to 8 is provided, and the DC voltage circuit (3) of the first 20 converter element (1) is connected to the first voltage source (11), and the DC voltage circuit (3) of the second converter element (2) is connected to the second voltage source (12).

25

8. A drive system having a first and a second drive converter (13, 14), which are connected to a rotating electrical machine (15), characterized in that a converter circuit as claimed in 30 one of claims 1 to 8 is provided, and the DC voltage circuit (3) of the first converter element (1) is connected to the first drive converter (13), and the DC voltage circuit (3) of the second converter element (2) is connected to the second drive converter (14).

35

9. A converter system having a first and a second load converter (17, 18) for feeding an electrical load (19),

- 20 -

characterized in that a converter circuit as claimed in one of claims 1 to 8 is provided, and the DC voltage circuit (3) of the first converter element (1) is connected to the first load converter (17), and the DC voltage circuit (3) of the second converter element (2) is connected to the second load converter (18).